

Response
Application No. 10/721,080
Attorney Docket No. 032117

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1-14 (Cancelled).

15. (Currently Amended) A semiconductor device comprising:

a semiconductor substrate;

an isolation trench formed under a surface of said semiconductor substrate;

a liner of a silicon nitride film covering a lower inner surface of said isolation trench,
wherein said liner of a silicon nitride film is retracted below the surface of said semiconductor substrate;

a first silicon oxide film formed in a region surrounded by said liner of the silicon nitride film and burying a lower region of said isolation trench;

a second silicon oxide film formed on said first silicon oxide film and burying an upper region of said isolation trench; and

active regions defined by said isolation trench;

wherein said first silicon oxide film and said second silicon oxide film are in direct contact with said silicon nitride film.

16. (Original) The semiconductor device according to claim 15, wherein said liner of the silicon nitride film is retracted below the surface of said semiconductor substrate by 80 nm to 150 nm.

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17. (Original) The semiconductor device according to claim 15, wherein said liner of the silicon nitride film has a thickness of 20 nm to 40 nm.

18. (Currently amended) The semiconductor device according to claim 15, wherein said second silicon oxide film ~~covers~~ extends over a corner and to an upper surface of said active region.

19. (Original) The semiconductor device according to claim 15, wherein a width of said isolation trench is 100 nm or narrower.

20-24. (Cancelled).

25. (New) A semiconductor device comprising:
a semiconductor substrate;
an isolation trench formed under a surface of said semiconductor substrate;
a liner of a silicon nitride film covering a lower inner surface of said isolation trench;
wherein said liner of a silicon nitride film is retracted below the surface of said semiconductor substrate;
a first silicon oxide film formed in a region surrounded by said liner of the silicon nitride film and burying a lower region of said isolation trench;

a second silicon oxide film formed on said first silicon oxide film and burying an upper region of said isolation trench;

active regions defined by said isolation trench; and

wherein said liner of the silicon nitride film is retracted below the surface of said semiconductor substrate by 80 nm to 150 nm.

26. (New) A semiconductor device comprising:

a semiconductor substrate;

an isolation trench formed under a surface of said semiconductor substrate;

a liner of a silicon nitride film covering a lower inner surface of said isolation trench; wherein said liner of a silicon nitride film is retracted below the surface of said semiconductor substrate;

a first silicon oxide film formed in a region surrounded by said liner of the silicon nitride film and burying a lower region of said isolation trench;

a second silicon oxide film formed on said first silicon oxide film and burying an upper region of said isolation trench;

active regions defined by said isolation trench; and

wherein said second silicon oxide film extends over a corner and to an upper surface of said active region.